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| 10/028,580 | 12/20/2001 | Brian R. Janes | 01-659US | 3268 |

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CATERPILLAR INC.
100 N.E. ADAMS STREET
PATENT DEPT.
PEORIA, IL 616296490

| EXAMINER |
|---|
| LOWE, MICHAEL S |

| ART UNIT | PAPER NUMBER |
|---|---|
| 3652 | |

DATE MAILED: 06/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/028,580 | JANES ET AL. | |
| | Examiner | Art Unit | |
| | M. Scott Lowe | 3652 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *23 February 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1 and 4-46* is/are pending in the application.

4a) Of the above claim(s) *36-46* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,4-11,13-27 and 29-35* is/are rejected.

7)☒ Claim(s) *12 and 28* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *11 March 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 5-10, 13-14, are rejected under 35 U.S.C. 103(a) as being unpatentable over Walth et al (US 6,158,949) in view of Liston (US 5,503,234).

Re claims 1, Walth teaches a load bearing arrangement for use with a work machine of the type having a platform 80, comprising:

at least one load bearing member 10 structured and arranged for coupling to the platform 80;

said load bearing member 10 having an end comprising a material having a first yield strength;

an aperture 70,54 formed in said end and having an aperture wall; at least one support member 56 contained within said aperture adjacent to at least a portion of said aperture wall, said support member having an opening sized to receive a bearing; and

said support member 56 having a second yield strength. Walth is silent on the whether the second yield strength is greater than said first yield strength. However, Liston teaches bearing sections having higher yield strength in order to improve performance and durability. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Walth by Liston to have the

second yield strength be greater than said first yield strength in order to improve performance and durability.

Re claims 5, Walth teaches load bearing arrangement wherein said member 10 comprises:

at least one top plate 16;

at least one bottom plate 18; and

at least one pair of spaced apart side plates 20, 21 each attached to said top plate 16 and said bottom plate 18.

Re claims 6, Walth teaches load bearing arrangement wherein said top plate comprises at least one integral mounting structure (not numbered but shown on figures 2-4).

Re claims 7, Walth teaches a load bearing arrangement comprising a substantially cylindrical attachment structure 50, 56 extending from at least one said side wall; and wherein said side wall is attached to said attachment structure 50, 56.

Re claims 8, Walth teaches a load bearing arrangement wherein said member 10 has a transverse width; and said attachment structure 50, 56 spans said transverse width.

Re claims 9, Walth teaches a load bearing arrangement further comprising at least one reinforcing structure (30, 26 or 42 by way of 30,26) attached by to at least one said side plate 20, 21.

Re claims 10, Walth teaches a load bearing arrangement wherein said reinforcing structure comprises a base portion (not numbered); and a rib portion (not numbered) extending from said base portion.

Re claims 13, 14, Walth teaches a pivotally connected attachment bucket 82.

Claims 4, 11, 15-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Walth et al (US 6,158,949) in view of Liston (US 5,503,234) and further in view of El Wakil ("Processes and Design for Manufacturing").

Re claims 4,11,20,27, Walth teaches items connected together but is silent on laser welding. El Wakil teaches (pages 85-87) laser welding as a versatile means of connecting items without causing excessive heat related problems (page 86). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Walth by El Wakil to use laser welding in order to have a versatile means of connecting items without causing excessive heat related problems.

Re claims 15, Walth teaches a load bearing arrangement for use with a work machine of the type having a platform 80, comprising a plurality of pieces connectable to form a member 10 structured and arranged for pivotable attachment to the platform; a weldment (columns 3-4, etc.) connecting at least two of said pieces. Walth is silent on weldments being simulated for effects of heat on at least one of said pieces subject to said weldment. However, El Wakil (pages 71-73,87-91) teaches weldments being simulated for effects of heat in order to choose the correct type of weld and to insure the

strength of the welded structure. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Walth by El Wakil to have weldments being simulated for effects of heat in order to choose the correct type of weld and to insure the strength of the welded structure.

Re claims 16, 35, Walth as modified teaches said effects being at least one of stress and deformation.

Re claim 17, Walth teaches a load bearing arrangement for use with a work machine of the type having a platform 80, comprising:

at least one load bearing member 10 structured and arranged for coupling to the platform 80;

said load bearing member 10 having an end comprising a material having a first yield strength;

an aperture 70,54 formed in said end and having an aperture wall; at least one support member 56 contained within said aperture adjacent to at least a portion of said aperture wall, said support member having an opening sized to receive a bearing; and

said support member 56 having a second yield strength. Walth is silent on the whether the second yield strength is greater than said first yield strength. However, Liston teaches bearing sections having higher yield strength in order to improve performance and durability. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Walth by Liston to have the second yield strength be greater than said first yield strength in order to improve performance and durability.

Re claim 18, Walth teaches the load bearing arrangement wherein said support member 56 comprises a substantially cylindrical structure having a through opening.

Re claim 19, Walth teaches load bearing arrangement further comprising a bearing 56 received in said opening.

Re claim 21, Walth teaches load bearing arrangement wherein said member 10 comprises:

at least one top plate 16;

at least one bottom plate 18; and

at least one pair of spaced apart side plates 20, 21 each attached to said top plate 16 and said bottom plate 18.

Re claim 22, Walth teaches load bearing arrangement wherein said top plate comprises at least one integral mounting structure (not numbered but shown on figures 2-4).

Re claim 23, Walth teaches a load bearing arrangement comprising a substantially cylindrical attachment structure 50, 56 extending from at least one said side wall; and wherein said side wall is attached to said attachment structure 50, 56.

Re claim 24, Walth teaches a load bearing arrangement wherein said member 10 has a transverse width; and said attachment structure 50, 56 spans said transverse width.

Re claim 25, Walth teaches a load bearing arrangement further comprising at least one reinforcing structure (30, 26 or 42 by way of 30,26) attached by to at least one said side plate 20, 21.

Re claim 26, Walth teaches a load bearing arrangement wherein said reinforcing structure comprises a base portion (not numbered); and a rib portion (not numbered) extending from said base portion.

Re claims 29, 30, 33, 34, Walth teaches a pivotally connected attachment bucket 82.

Re claim 31, Walth teaches a load bearing apparatus, comprising: a work machine having a platform 80; at first member 10, having a longitudinal axis, coupled to said platform 80; a first movement means (not numbered) for moving said first member 10 relative to said platform; a second member 68, having a longitudinal axis, pivotally coupled to said first member 10; a second movement means (not numbered) for moving said second member 68 relative to said first member 10; a plurality of pieces connectable to form at least one of said first and second members; a weldment connecting at least two of said pieces. Walth is silent on weldments being simulated for effects of heat on at least one of said pieces subject to said weldment. However, Wakil (pages 71-73,87-91) teaches weldments being simulated for effects of heat in order to choose the correct type of weld and to insure the strength of the welded structure. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Walth by Wakil to have weldments being simulated for effects of heat in order to choose the correct type of weld and to insure the strength of the welded structure.

Re claim 32, Walth teaches first and said second movement means comprises hydraulic cylinders.

***Allowable Subject Matter***

Claims 12, 28 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Yancy (US 3,902,295) teaches boom construction, figure 3 shows adjacent side plates of different thicknesses welded together.

Sato (US 6,334,252) teaches laser welding.

Applicant's arguments with respect to comments directed to laser welding, yield strength and weld simulation have been considered but are moot in view of the new ground(s) of rejection. Nonetheless, applicant should review MPEP 2175.05(g), In re Best (562 F.2d 1252, 195 USPQ 430, 433 (CCPA 1977)), and Atlas Powder Co. v. IRECO, Inc. (190 F.3d 1342, 51 USPQ2d 1943 (Fed. Cir. 1999)). Although functional language is permitted in apparatus claims, the test for meeting such limitations is much lower than that of structural language limitations.

Regarding applicant's arguments in the second paragraph of page 10 of the amendment, the Walth reference meets the claims as currently written. Structure 42

attaches thru structures 30,16,18 to the sides. Further, it is an inherent property of nearly any item to have a base and intermediate (rib) portion.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. Scott Lowe whose telephone number is 703-305-1940. The examiner can normally be reached on 6:30am-4:30pm M,Tu,Th,F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eileen Lillis can be reached on 703-308-3248. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

msl

EILEEN D. LILLIS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600